



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

In terms of regulation 36 of the Environmental Impact Assessment Regulations, 2010

Plan 8 Infinite Energy (Pty) Ltd 140 MW Wind Energy Facility near Copperton, Northern Cape

Province

Pixley ka Seme District Municipality

Authorisation register number:	12/12/20/2099
NEAS reference number:	DEA/EIA/0000044/2010
Last amended:	First issue
Holder of authorisation:	PLAN 8 INFINITE ENERGY (PTY) LTD
Location of activity:	NORTHERNCAPE PROVINCE: Within the Siyathemba Local Municipality

This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA regulations.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises –

PLAN 8 INFINITE ENERGY (PTY) LTD

with the following contact details –

Mr Zuben Jessa

Copperton Wind Farm (Pty) Ltd

P.O. Box 3804

CAPE TOWN

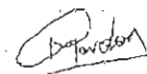
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to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notices 1, 2 or 3 (GN R.544, 545 & 546):

Listed Activities	Activity description
<p><u>GN R.544: Item 10:</u> <i>The construction of facilities or infrastructure for the transmission and distribution of electricity-</i> (i) <i>Outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts.</i></p>	<p>A transmission line of approximately 8.6km in length could be required to connect into the Eskom 132kV grid. The site is in a rural area. Alternatively an onsite connection (including a 33kV to 132kV transformer substation) is being considered.</p>
<p><u>GN R.544: Item 11:</u> <i>The construction of:</i> (xi) <i>infrastructure or structures covering 50 square metres or more</i> <i>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i></p>	<p>A number of roads, greater than 50m² would cross drainage lines or will be located within 32m of drainage lines.</p>
<p><u>GN R.544: Item 18:</u> <i>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from:</i> (i) <i>a watercourse:</i> <i>but excluding where such infilling, depositing, dredging, excavation, removal or moving;</i> (a) <i>is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</i> (b) <i>occurs behind the development setback line.</i></p>	<p>A number of roads, comprising more than 5m³, would cross drainage lines.</p>
<p><u>GN R.545: Item 1:</u> <i>The construction of facilities or infrastructure for the</i></p>	<p>The proposed wind energy facility would generate approximately 140MW of electricity.</p>

P. Prinsloo

<p><i>generation of electricity where the electricity output is 20 megawatts or more.</i></p>	
<p><u>GN R.545: Item:7</u> <i>The construction of</i> (i) airports, or (ii) runways or aircraft landing strips longer than 1,4 kilometres</p>	<p>An airstrip of the same design and approximately 1700x60m would be constructed to replace a nearby strip.</p>
<p><u>GN R.546: Item 14:</u> <i>The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation,</i> a) Northern Cape: i. All areas outside urban areas.</p>	<p>Up to 35ha of indigenous vegetation would be cleared for the proposed wind energy facility, in a rural area.</p>

as described in the Environmental Impact Assessment Report (EIR) dated May 2011:

- for the construction of the 140MW Wind Energy Facility, consisting of 56 turbines of 2,5MW each, steel tower, 90m high on the farm Struisbult (Farm No.103 Portions 4 and 7 and Farm No 104 Portion 5) near Copperton and the relocation of an existing airstrip to Portions 1 and 2 of Farm No.105, approximately 7km east of the site onto Armscor (Alkantpan) within the Pixley ka Seme District Municipality in the Northern Cape Province, hereafter referred to as "the property".

The facility and its associated infrastructure will comprise the following:

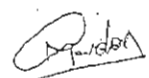
- A power line to connect into the existing 132 kV national transmission grid (including all associated power transmission infrastructure such as transformer substations) and roads, hard standings and cabling between the turbines.
- Gravel surface access roads of approximately 6m wide would also be required between each turbine. Cables connecting each turbine would be buried beneath the proposed access roads.
- There is an existing distribution infrastructure, which is designed for 132 kV distribution adjacent to the site. This is the Eskom Cuprum Substation located at the disused copper mine approximately 6.5km to the south west. The proposed project would connect to the grid via a transmission line from the proposed substation to Cuprum Substation.
- An alternative grid connection would be via an onsite connection to the transmission lines traversing the site. The location of the proposed substation for this alternative would also be at the

entrance to the site and the power would be stepped up from 33 or 22kV to 132kV either onsite or at Cuprum Substation.

Conditions of this Environmental Authorisation

Scope of authorisation

1. The preferred sites on the farm Struisbult (Farm No. 103 Portions 4 and 7 and Farm No 104 Portion 5) for the wind energy facility; and on Portions 1 and 2 of Farm No 105 approximately 7km east of the site onto Armscor (Alkantpan) for the relocation of an existing airstrip are approved.
2. The tower with a hub height of 90m is approved to ensure that the risk of detrimental effect on radio astronomy observations conducted by the SKA is low. Should the holder of the authorisation wish to change the tower height due to new technologies, an application for amendment of the authorisation must be lodged with this department and the applicant must obtain new comments from the Square Kilometre Array (SKA).
3. Authorisation of the activity is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
4. The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
5. The activities authorised may only be carried out at the property as described above.
6. Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.
7. This activity must commence within a period of three (3) years from the date of issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.



8. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
9. The holder of an environmental authorisation has the responsibility to notify the competent authority of any alienation, transfer and change of ownership rights in the property on which the activity is to take place.

Notification of authorisation and right to appeal

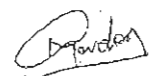
10. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.
11. The notification referred to must –
 - 11.1. specify the date on which the authorisation was issued;
 - 11.2. inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the Environmental Impact Assessment (EIA) Regulations, 2010;
 - 11.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 11.4. give the reasons for the decision.
12. The holder of the authorisation must publish a notice –
 - 12.1. informing interested and affected parties of the decision;
 - 12.2. informing interested and affected parties where the decision can be accessed; and
 - 12.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in the newspaper(s) contemplated and used in terms of regulation 54(2) (c) and (d) and which newspaper was used for the placing of advertisements as part of the public participation process.

Management of the activity

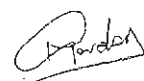
13. An amended Environmental Management Programme (EMPr) must be submitted to the Department for written approval prior to commencement of the activity along with a final development site layout. All available biodiversity information must be used in the finalisation of the layout plan. The development layout must indicate the following:
 - 13.1. Development footprint;



- 13.2. Wetlands, drainage lines, rivers, stream and water crossing of roads and cables indicating the type of bridging structures that will be used;
 - 13.3. The location of heritage sites;
 - 13.4. Sub-station(s) and/or transformer(s) sites including their entire footprint;
 - 13.5. Connection routes (including pylon positions) to the distribution/transmission network;
 - 13.6. All existing infrastructure on the site, especially roads;
 - 13.7. Buildings; including accommodation;
 - 13.8. All "no-go" areas.
 - 13.9. A map combining the final layout plan superimposed on the environmental sensitivity map. This map must reflect the location of PV Panels as stated in the EIR dated April 2012 and this authorisation.
14. The final development layout must also be superimposed over an environmental sensitivity map to be submitted to the department.
 15. The applicant must appoint a qualified botanical and fauna specialist to ground-truth every footprint and their recommendation must inform the final layout of the renewable energy facility and EMPr to be submitted to the department for approval.
 16. The draft EMPr submitted as part of the application for environmental authorisation must be amended and submitted with the abovementioned layout plan to the Department for written approval prior to commencement of the activity.
 17. The EMPr amendments must include the following:
 - 17.1. All recommendations and mitigation measures recorded in the EIR dated March 2012.
 - 17.2. The requirements and conditions of this authorisation.
 - 17.3. A plant rescue and protection plan which allows for the maximum transplant of conservation important species from areas to be transformed. This plan must be compiled by a vegetation specialist familiar with the site in consultation with the ECO and be implemented prior to commencement of the construction phase.
 - 17.4. An open space management plan to be implemented during the construction and operation of the facility.
 - 17.5. A re-vegetation and habitat rehabilitation plan to be implemented during the construction and operation of the facility including timeframes for restoration which must indicate rehabilitation within the shortest possible time after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.



- 17.6. An alien invasive management plan to be implemented during construction and operation of the facility. The plan must include mitigation measures to reduce the invasion of alien species and ensure that the continuous monitoring and removal of alien species is undertaken.
- 17.7. A storm water management plan to be implemented during the construction and operation of the facility. The plan must ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion. The plan must include the construction of appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
- 17.8. An effective monitoring system to detect any leakage or spillage of all hazardous substances during their transportation, handling, use and storage. This must include precautionary measures to limit the possibility of oil and other toxic liquids from entering the soil or storm water systems.
- 17.9. An erosion management plan for monitoring and rehabilitating erosion events associated with the facility. Appropriate erosion mitigation must form part of this plan to prevent and reduce the risk of any potential erosion.
- 17.10. A traffic management plan for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan must include measures to minimize impacts on local commuters e.g. limiting construction vehicles travelling on public roadways during the morning and late afternoon commute time and avoid using roads through densely populated built-up areas so as not to disturb existing retail and commercial operations.
- 17.11. Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants.
18. The approved EMPr must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.
19. Changes to the EMPr, which are environmentally defensible, shall be submitted to this Department for acceptance before such changes shall be implemented.
20. The provisions of the approved EMPr including the mitigation measures identified in the EIR dated March 2012 and specialist studies shall be an extension of the conditions of this EA and therefore noncompliance with them would constitute noncompliance with the EA.



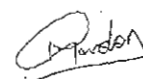
21. The holder of this authorisation must appoint qualified vegetation, fauna, heritage and avifauna specialists to ground-truth every infrastructure footprint and their recommendation must inform the final layout of the facility and the EMPr to be submitted to the department for approval.

Environmental Control Officer (ECO) and duties

22. The applicant must appoint a suitably experienced independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.
23. The ECO shall be appointed before commencement of any authorised activity.
24. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department.
25. The ECO shall keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
26. A detailed incident (including spillage of bitumen, fuels, chemicals, or any other material) and complaint register must be kept on site indicating how these issues were addressed, what rehabilitation measures were taken and what preventative measures were implemented to avoid re-occurrence of incidents/complaints.
27. In addition the ECO must maintain the following on site:
- 27.1. A daily site diary;
 - 27.2. Copies of all reports submitted to the Department; and
 - 27.3. A schedule of current site activities including the monitoring of such activities.
28. The ECO shall remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.
29. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Environmental audit report

30. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the *Director: Compliance Monitoring* at the Department.




31. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.
32. The environmental audit report must:
 - 32.1. Be compiled by an independent environmental auditor;
 - 32.2. Indicate the date of the audit, the name of the auditor and the outcome of the audit;
 - 32.3. Evaluate compliance with the requirements of the approved EMP and this environmental authorisation;
 - 32.4. Include measures to be implemented to attend to any non-compliances or degradation noted;
 - 32.5. Include copies of any approvals granted by other authorities relevant to the development for the reporting period; and
 - 32.6. Highlight any outstanding environmental issues that must be addressed, along with recommendations for ensuring these issues are appropriately addressed.
 - 32.7. The audit report must be submitted prior to commencement of the operation phase of the project.

Commencement of the activity

33. The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
34. An appeal under section 43 of the National Environmental Management Act (NEMA), Act 107 of 1998 (as amended), does not suspend an environmental authorisation or exemption, or any provisions or conditions attached thereto, or any directive, unless the Minister, MEC or delegated organ of state directs otherwise.
35. Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you may not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.

Notification to authorities

36. Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must



include a date on which it is anticipated that the activity will commence. This notification period may coincide with the notice of intent to appeal period.

Operation of the activity

37. Fourteen (14) days written notice must be given to the Department that the activity operational phase will commence.

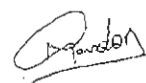
Site closure and decommissioning

38. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

Specific conditions

Avifauna and bats

39. A bird and bat monitoring programme must be implemented to document the effect of the operation of the energy facility on avifauna and bats for a period of 12 months. This should commence prior to construction, and continue during operation of the energy facility.
40. The results of the pre-construction bird and bat monitoring programme must inform the final layout and the construction schedule of the energy facility.
41. Reports regarding bird and bats monitoring must be submitted to the relevant provincial environmental department, BirdLife South Africa, the Endangered Wildlife Trust (EWT) and this Department on a quarterly basis. The report will assist all stakeholders in identifying potential and additional mitigation measures and to establish protocols for a bird monitoring programme for wind energy development in the country.
42. The baseline data collected and documented during the survey must be shared with the EWT and BirdLife South Africa for a better understanding of the distribution or breeding behaviour of any of the priority species.
43. Anti-collision devices such as bird flappers must be installed where power lines cross avifaunal corridors. The input of an avifaunal specialist must be obtained for the fitting of the anti-collision devices onto specific sections of the line once the exact positions of the towers have been



surveyed and pegged. Flappers must be fitted in place so that they do not drift along the line and be readily and cost effectively installed on, or removed from the existing lines.

Vegetation, wetlands and water resources

44. All species of special concern (SSC) must be identified and every effort must be made to rescue them.
45. The applicant must ensure that the continuous monitoring and removal of alien plant species is undertaken. An alien removal program must be developed and implemented.
46. A "Plant Rescue and Protection" plan which allows for the maximum transplant of conservation important species from areas to be transformed must be compiled by a vegetation specialist familiar with the site in consultation with the ECO. This plan must be implemented prior to commencement of the construction phase.
47. Before the clearing of the site, the appropriate permits must be obtained from the Department of Agriculture, Forestry and Fisheries (DAFF) for the removal of plants listed in the National Forest Act and from the relevant provincial department for the destruction of species protected in terms of the specific provincial legislation. Copies of the permits must be submitted to the Department for record keeping.
48. The applicant must obtain a Water Use Licence from the Department of Water Affairs (DWA) prior to the commencement of the project should the applicant impact on any wetland or water resource. A copy of the license must be submitted to the Director: Integrated Environmental Authorisations at the Department.
49. Construction activities must be restricted to demarcated areas to restrict impact on vegetation, birds and animals.
50. The applicant is required to inform the relevant provincial department and/or this Department should the removal of protected species, medicinal plants and "data deficient" plant species is required.
51. All turbines must be located at least 100m from the edge of any highly sensitive areas.
52. Removal of alien invasive species or other vegetation and follow-up procedures must be in accordance with the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).
53. The applicant must ensure that all the "No-go" areas are clearly demarcated (using fencing and appropriate signage) before construction commences.
54. Siting of turbines should adhere to >500m setbacks from large water bodies, riparian vegetation and rocky crevices, if and where high bat occurrence is found after monitoring.



Roads and transportation


55. Existing road infrastructure must be used as far as possible for providing access to the proposed turbine positions. Where no road infrastructure exists, new roads should be placed within existing disturbed areas or environmental conditions must be taken into account to ensure the minimum amount of damage is caused to natural habitats.
56. Internal access roads must be located away from drainage bottoms and avoid wetlands, if feasible.
57. Internal access roads must be located to minimize stream crossings. All structures crossing streams must be located and constructed so that they do not decrease channel stability or increase water velocity.
58. Existing drainage must not be altered, especially in sensitive areas.

Noise

59. Noise from the turbines at the identified noise sensitive areas must be less than the 45dB (A) limit for rural areas presented in SANS10103.
60. The applicant must ensure that the National Noise Control Regulations and SANS10103:2008 are adhered to and reasonable measures to limit noise from the work site are implemented.
61. The applicant must ensure that the construction staff working in areas where the 8-hour ambient noise levels exceed 75dBA must wear ear protection equipment.
62. The applicant must ensure that all equipment and machinery are well maintained and equipped with silencers.
63. The applicant must provide a prior warning to the community when a noisy activity e.g. blasting is to take place.
64. All wind turbines must be located at a setback distance of 500m from any homestead and a day/night noise criteria level at the nearest residents of 45dB(A) must be used to locate the turbines. The 500m setback distance can be relaxed if local factors; such as high ground between the noise source and the receiver, indicates that a noise disturbance will not occur.
65. Positions of turbines jeopardizing compliance with accepted noise levels must be revised during the micro-siting of the units in question and predicted noise levels re-modelled by the noise specialist, in order to ensure that the predicted noise levels are less than 45dB(A).

Visual resources

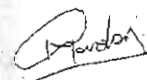
66. A lighting engineer must be consulted to assist in the planning and placement of light fixtures in order to reduce visual impacts associated with glare and light trespass.



67. Signage on or near wind turbines should be avoided unless they serve to inform the public about wind turbines and their function.
68. Commercial messages and graffiti on turbines must be avoided.
69. Turbines must be finished in matte white or off-white and be without contrast colour stripes.
70. Any lighting on the turbines must be kept to a minimum, and is coloured (red or green) and intermittent, rather than permanent and white, to reduce confusion effects for nocturnal migrants.

Human health and safety

71. A health and safety programme must be developed to protect both workers and the general public during construction, operation and decommissioning of the energy facility. The programme must establish a safety zone for wind turbines from residences and occupied buildings, roads, right-of-ways and other public access areas that is sufficient to prevent accidents resulting from the operation of the wind turbines.
72. Potentials interference with public safety communication systems (e.g. radio traffic related to emergency activities) must be avoided.
73. The applicant must ensure that the operation of the wind facility has minimal electromagnetic interference (EMI) (i.e. impacts to microwave, radio and television transmissions) and should comply with the relevant communication regulations.
74. The applicant must obtain a written permit or approval from the South Africa Civil Aviation Authority that the wind facility will not interfere with the performance of aerodrome radio Communication, Navigation and Surveillance (CNS) equipment especially the radar prior to commencement of the activity. The approval/permit must be submitted to the *Director: Integrated Environmental Authorisations*.
75. The applicant must obtain approval from the South Africa Weather Services (WeatherSA) that the energy facility will not interfere with the performance of their equipment, especially radar, prior to commencement of the activity. The approval must be submitted to the *Director: Integrated Environmental Authorisations*.
76. The applicant must train safety representatives, managers and workers in workplace safety. The construction process must be compliant with all safety and health measures as prescribed by the relevant act.
77. Liaison with land owners/farm managers is to be done prior to construction in order to provide sufficient time for them to plan agricultural activities. If possible, construction should be scheduled to take place within the post-harvest and pre-planting season, when fields are lying fallow.
78. No unsupervised open fires for cooking or heating must be allowed on site.



79. Plan 8 must obtain the fibre route information from both Telkom SA Limited and Broadband Infraco in order to ensure that damage to the optical fibre infrastructure is negated, or at least minimised, during construction.
80. Any damage caused by the holder of the authorisation (or its contractors) during construction of the wind energy facility must be repaired immediately at their own cost.
81. The proposed wind farm facility must be compliant with the regulations to be promulgated for the Karoo Central Astronomy Advantage Area 1 for the purposes of protecting radio astronomy observations, conducted by the SKA, from electromagnetic interference associated with electricity generation, transmission and distribution infrastructure.

Hazardous materials and waste management

82. Areas around fuel tanks must be bunded or contained in an appropriate manner as per the requirements of SABS 089:1999 Part 1.
83. Leakage of fuel must be avoided at all times and if spillage occurs, it must be remedied immediately.
84. Hazardous waste such as bitumen, oils, oily rags, paint tins etc. must be disposed of at an approved hazardous waste landfill site.
85. Streams, river, pans, wetlands, dams and their catchments and other environmental sensitive areas must be protected from the direct or indirect spillage of pollutants.
86. No dumping or temporary storage of any materials may take place outside designated and demarcated lay down areas, and these must all be located within areas of low environmental sensitivity.
87. Hazardous substances must not be stored where there could be accidental leakage into surface or subterranean water.
88. Hazardous and flammable substances must be stored and used in compliance to the applicable regulations and safety instructions. Furthermore, no chemicals must be stored nor may any vehicle maintenance occur within 350m of the temporal zone of wetlands, a drainage line with or without an extensive floodplain or hillside wetlands.
89. Temporary bunds must be constructed around chemical storage to contain possible spills.
90. Spill kits must be made available on-site for the clean-up of spills.
91. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste shall be disposed of at a landfill licensed in terms of section 20(b) of the National Environment Management Waste Act, 2008 (Act 59 of 2008).



Excavation and blasting activities

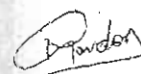
92. Borrow materials must be obtained only from authorized and permitted sites.
93. Appropriate Anti-erosion measures such as silt fences must be installed in disturbed areas.

Air emissions

94. Dust abatement techniques must be used before and during surface clearing, excavation, or blasting activities.
95. Appropriate dust suppression techniques must be implemented on all exposed surfaces during periods of high wind. Such measures may include wet suppression, chemical stabilisation, the use of a wind fence, covering surfaces with straw chippings and re-vegetation of open areas.

Historical / cultural / paleontological resources

96. The season pan, Saaipan must be fenced off during construction since it is located on the footprint of the power line. The fence must run at least 30m from the edge of the pan.
97. The holder of the authorisation must commission a Conservation Management Plan for Modderpan and the two kraals. The owner of the property must be provided with a copy of the Conservation Management Plan and this must be transferred to any new owner of the property.
98. Modderpan must not be impacted by the development and any of the associated activities. A buffer zone of 250m from the centre of the pan must be respected. It is required that during construction activities the pan is fenced off. The fence may be removed once the construction phase is terminated, however it must be clearly indicated on all maps of the site to make sure that no future activities planned in the area accidentally impact on it.
99. If there are any changes to the layout of the turbines, then additional survey work will be required in order to ensure that no sites are directly impacted and/or to identify the need for an excavation permit.
100. Should any graves be found, all construction activities must be suspended and an archaeologist be contacted immediately. The discovered graves must be cordoned off.
101. The developer or the archaeologist on behalf of the developer must apply from SAHRA for destruction permit for quarries VGSTR 5-7 and NPRT3.
102. A buffer zone of at least 30m from their perimeters must be respected around kraals NPRT4 and VGSTR12.



Storm water management

103. Construction must include appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.

Turbines position

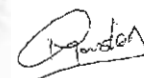
104. Turbines must be positioned in such a way that shadow flicker does not affect any farm buildings.

Overhead power line

105. A walk-through survey of the final power line corridor must be undertaken by a botanical specialist, an ornithologist and a heritage specialist to identify areas where mitigation may be required.
106. All sections of the proposed power line passing over, or in close proximity of grasslands, rivers, wetlands, and dams must be marked with suitable bird flight diverters in order to deter large birds from colliding with any power line.

General

107. A copy of this authorisation and the approved EMPr must be kept at the property where the activity will be undertaken. The authorisation must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorisation who works or undertakes work at the property.
108. The holder of the authorisation must notify both the *Director: Integrated Environmental Authorisations* and the *Director: Compliance Monitoring* at the Department, in writing and within 48 (forty eight) hours, if any condition of this authorisation cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
- 109.



National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 15 AUGUST 2012



Mr Mark Gordon
Chief Director: Integrated Environmental Authorisations
Department of Environmental Affairs

Annexure 1: Reasons for Decision

1. Information considered in making the decision

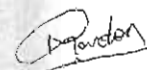
In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the EIR dated March 2012;
- b) The comments received from South African Heritage Resources Agency (SAHRA), the Department of Science and Technology (DST), the Department of Water Affairs (DWA), the Department of Agriculture, Forestry and Fisheries (DAFF), the Square Kilometre Array (SKA), the South African Civil Aviation Authority (SACAA) and interested and affected parties as included in the EIR dated March 2012;
- c) Mitigation measures as proposed in the EIR dated March 2012 and the EMPr;
- d) The information contained in the specialist studies contained within Appendix D of the EIR; and
- e) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998).

2. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project stems from the need for clean and renewable energy sources to reduce the country's energy supply problems.
- c) The EIR dated March 2012 identified all legislation and guidelines that have been considered in the preparation of the EIR dated March 2012.
- d) The methodology used in assessing the potential impacts identified in the EIR dated March 2012 and the specialist studies have been adequately indicated.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2010 for public involvement.



Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) The identification and assessment of impacts are detailed in the EIR dated March 2012 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The procedure followed for impact assessment is adequate for the decision-making process.
- c) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- e) The EAP has indicated that the information contained in the EIR dated March 2012 is accurate and credible.
- f) EMP measures for the pre-construction, construction and rehabilitation phases of the development were proposed and included in the EIR and will be implemented to manage the identified environmental impacts during the construction process.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The application is accordingly granted.

